PRINCE EDWARD ISLAND

ENERGY CORPORATION

ANNUAL REPORT

1982-1983

BOARD OF DIRECTORS

Hon. Frederick L. Driscoll, Chairman
Mr. John H. Reynolds, Vice Chairman
Mr. G. Douglas Dennis, Secretary-Treasurer
Dr. C. Kirk Brown
Mr. Bruce McCallum
Mr. Donald Gillis
Mr. Norman F. Stewart
Mr. John R. DeGrace

The Honourable Frederick L. Driscoll
Minister
Department of Energy & Forestry
P.O. Box 2000
Charlottetown, P.E.I.

Dear Mr. Minister:

I have the honour to present to you the attached annual report of the Prince Edward Island Energy Corporation for the year ending March 31, 1983. This report has been prepared and is submitted in accordance with the Energy Corporation Act, Section 10(1).

Respectfully submitted,

Arthur J. Hiscock
General Manager

1. INTRODUCTION

This is the fourth annual report of the P.E.I. Energy Corporation. The Energy Corporation was established by the Energy Corporation Act which was proclaimed on December 9, 1978.

The objectives of the Energy Corporation are to develop and promote energy systems on an economic and efficient basis, and to coordinate all government programs in the establishment and application of energy systems in the province.

The Corporation operates within the general framework of provincial energy policy which is the responsibility of the Minister of Energy & Forestry.

2. BOARD OF DIRECTORS

The members of the Board of Directors as of 31 March, 1983 and their term of office are as follows:

Hon. Frederick L. Driscoll, Chairman — 28 October, 1982
John H. Reynolds, Vice Chairman — 5 October 1980 — 5 October 1983
G. Douglas Dennis, Secretary-Treasurer — 9 November 1981 — 9 Nov. 1984
C. Kirk Brown — 5 October 1980 — 5 October 1983
Bruce McCallum — 18 September 1980 — 18 September 1983
Donald Gillis — 26 March 1981 — 26 March 1984
Norman F. Stewart — 26 March 1981 — 26 March 1984
Hon. Barry Clark (resigned) — 1 April 1980 — 28 October 1982
John R. DeGrace — 9 September 1982 — 9 September 1985

3. STAFF

The staff of the Energy Corporation consists of three full time positions, unchanged from last year. The policy of the Corporation is to contract services from the private sector rather than increase staff.

4. ACTIVITIES

The principal projects have been the Charlottetown Area Garbage Incinerator and the Kings County Memorial Hospital wood fueled heating system. The commissioning of both of these units took place during the current fiscal year and operations to date have been most satisfactory. In addition, the Corporation has been involved with other government departments and agencies in developing proposals or conducting studies to determine economic ways of reducing the province's dependence on oil, through a cost effective mix of alternative energy supply and conservation. Additional details on some of these activities and projects follow.

4.1 Charlottetown Area Garbage Incinerator

Construction work which began September of 1981 stayed on schedule during the summer of 1982 and all major contracts were completed by December 1982. Exterior work which remains for the summer of 1983 consists of landscaping and the final layer of asphalt.

The following 1983 milestone dates are noted:

February 10	— start of incinerator curing, first municipal wastes delivered to plant
March 14-21	— performance testing
April 12	— acceptance of the plant by the Energy Corporation
(tentative)	— start of five year operating contract with Tricil Limited
June 17	— official opening
(tentative)	

A Startup Committee consisting of two Board Members and the General Manager was appointed to supervise the official startup and to deal with any operating problems which might be encountered.

4.2 The Kings County Memorial Hospital Wood-fuel Heating System

The wood chip fired boiler was put into operation on the 9th of May, 1982 and, except for a one-week shutdown period in September of 1982 due to mechanical failure of a fan, the unit provided the complete heating load of the hospital during the 1982 heating season.

The official opening of the plant took place on the 28th of January, 1983, with Mrs. Anne White, Chairperson of the Kings County Memorial Hospital, the Honourable Bennett Campbell, Minister of Veterans' Affairs and the Honourable Frederick L. Driscoll officiating.

The unit is currently being evaluated for heating efficiency and steam generation capacity. When a two-year period of testing and monitoring is complete, the Energy Corporation intends to evaluate the unit for general application throughout the province.

4.3 Electric Supply and Demand Study

Slater Engineering Consultants Inc. was retained in May of 1981 to examine the electrical supply and demand alternatives for Prince Edward Island to 1995.

A detailed presentation of the final report was made to the Board of Directors by Mr. Slater on the 14th of June, 1982, and the report is now available as a planning document for government and the private sector.

4.4 Wood Blocking and Splitting Program

This program, which provided 50% of the cost of wood blocking and splitting equipment up to $1,250, was initiated in 1981 to ensure that equipment was available on a rental basis throughout the province. Due to the popularity of the program it was extended to fiscal year 1982-83 and was terminated at the end of that year. A total of 37 grants were approved under the Program.

4.5 Renewable Energy Initiatives Program

The prime objectives of this program are to demonstrate promising renewable energy technologies; to develop public awareness and understanding of these technologies; and to create employment in new or existing industries.

During fiscal year 1982-83, five offers of grants were made under the program and three were accepted with the expenditure of $95,472 during the fiscal year. Some applicants had been proposing to apply for a grant under the Conservation and Renewable Energy Demonstration Program of Energy, Mines & Resources Canada as well as the Provincial Program. Delay in initiating some projects was due to the fact that Energy, Mines & Resources Canada had not made a decision with regards to the joint cost sharing of projects with the Corporation. It is proposed to extend the program to fiscal year 1983-84.

4.6 Farm Energy Conservation and Energy Alternative Demonstration Projects

The P.E.I. Energy Corporation, in cooperation with the Department of Agriculture and Forestry, and DREE, initiated a program to research and demonstrate systems and methods to save energy and substitute conventional energy forms used on Prince Edward Island farms. The objectives of this demonstration project were:

To identify potential energy savings.
To identify energy substitution options.
To demonstrate the feasibility of energy saving and substitution options.
To provide information to the Prince Edward Island farm community.

An advisory team, consisting of representatives from government departments and the farming community, was created to review projects submitted by eligible applications and to recommend project approvals to the Energy Corporation.

A full energy audit of farm buildings, field operations and a farm home was a prerequisite of any grant being approved. Consequently, the program was slow in starting, but during the fiscal year, eleven projects with a total capital cost of $37,025 were approved. The program has been approved for funding under the Comprehensive Development Plan for the fiscal year 1983-84.

4.7 Demonstration of Intermediate-size Wood Chip Burning Unit

This project was listed as a project under development in the 1981-82 Annual Report. A number of sites in Kings County were examined and the Montague Junior High School was selected for the demonstration project to be funded under the Comprehensive Development Plan. Engineering design was begun during the winter of 1982 and the installation of the equipment is scheduled for the summer of 1983 at an estimated capital cost of $130,000.

5. PROJECTS UNDER DEVELOPMENT

5.1 District Heating Study Proposal

In November, 1982, the Corporation was advised by Energy, Mines and Resources Canada that the District Heating Program, as outlined in a National Energy Program of October 1980, had not been approved by the Federal Treasury Board and that the only source of funding for future studies would be from the direct delivery Conservation and Renewable Energy Demonstration Program of Energy, Mines & Resources Canada.

The District Heating Study Proposal as developed by the Corporation has been resubmitted to the Energy Sector of the Department of Energy, Mines & Resources Canada for consideration of funding under CRED-P.

5.2 Mt. Pleasant Wind Farm

During the summer of 1982 an application for cost sharing of a wind farm project between Energy, Mines & Resources Canada; the National Research Council; and the Energy Corporation was submitted to Energy, Mines & Resources Canada. While the National Research Council indicated a willingness to participate, the Corporation was advised in March of 1983 that Energy, Mines & Resources Canada was reluctant to fund such a demonstration project, feeling that the project should be held in abeyance until larger size wind turbines are available for such a demonstration. The matter of a wind farm demonstration project for Canada was discussed by the Inter-provincial Advisory Council on Energy (IPACE) and there was consensus that such a demonstration was of National significance It was suggested that the wind farm proposal be submitted to IPACE to determine the feasibility of joint funding by a number of provinces. A submission has been made to the Research Development and Demonstration Sub-Committee of IPACE and the matter will be placed on the Agenda for the next meeting of the Council of Provincial Energy Ministers.

5.3 Pelletized Wood Fuel Production

As noted in the 1981-82 Annual Report, at a Public Meeting to discuss the interests in wood fuel pelletizing production, it was generally agreed that the following background studies were required:

a) Use of straw as a fuel source
b) Inventory of sawmill residue on P.E.I. and a projected annual volume
c) Review of existing pelletizing technologies
d) Identification of possible government financing

Funding for preparation of the background studies was obtained under the Comprehensive Development Plan and contracts were awarded in June of 1982, with the final reports being submitted to the Steering Committee in November of 1982.

It was noted that under the federal Department of Industry, Trade & Commerce, funding was available to conduct a detailed feasibility study of pelletized wood fuel production on Prince Edward Island. All individuals

who had expressed an interest in pelletized wood fuel production were forwarded copies of the background studies as well as the application forms for funding under Industry, Trade & Commerce. To date, one application has been received by Industry, Trade & Commerce, and a study is in progress.

6. STUDIES IN PROGRESS

6.1 Energy Monitoring and Management Systems for Schools

As a joint project of the Prince Edward Island Energy Corporation and the Department of Education, Enerplan Consultants Ltd., of Moncton, N.B. was retained to prepare a comprehensive energy conservation program for all elementary and secondary schools in the Province of Prince Edward Island, with particular emphasis on energy monitoring and management.

The approach to such a plan would be, first, to optimize the energy use in the schools by retrofit based on recommendations in the Enersave reports in cooperation with the Consultant, and then to maintain this optimum by management and monitoring. It is expected that the management and monitoring system will minimize unnoticed energy waste due to slippage in equipment calibration, unnecessary equipment operation and inadequate preventive maintenance.

A Steering Committee, chaired by the Energy Corporation, and with representatives from the Department of Education, Department of Public Works, and Treasury Board was formed to supervise the study. The final report is due in April, 1983.

6.2 Energy Options for Prince Edward Island

As outlined in the 1981-82 Annual Report, the Federal and Provincial Energy Ministers agreed to have the Energy Option Study carried out under a Federal-Provincial Steering Committee. Since the General Manager of the Energy Corporation was the Acting Director of the Energy and Mineral Branch, the Corporation was involved in developing the terms of reference for the Study as well as establishing a completion date.

With the appointment of a Director of Energy and Minerals in September of 1982, the responsibility for seeing this study completed was transferred to the Energy Branch of the Department of Energy & Forestry.

6.3 P.E.I. Hospital Conversion to Wood Fuel

The final report of this Consultant's Study was received in July of 1982 and indicated that the most economical viable installation would be a green wood chip fired boiler. The recommendation for an initial installation was to convert the P.E.I. Hospital heating system to wood fuel and provide heat to the Provincial Administration Building.

With the opening of the new Queen Elizabeth Hospital, the future use of all or a portion of the old P.E.I. Hospital had to be determined by the Depart-

ment of Transportation and Public Works. Since this matter was currently before Executive Council, it was directed that any further review of a wood fuel system for the P.E.I. Hospital be held in abeyance pending the final decision on the Hospital's use.

6.4 Private Woodlot Owners Survey

The Forestry Branch of the Department of Energy and Forestry have accurate and updated information concerning the biomass inventory of the province, as well as the annual yield. While the yield may be more than adequate to meet the new initiatives in wood as a source of energy, the availability of this wood is being questioned by the industrial and commercial sector. Since only some 50,000 acres of the 600,000 acres of forest land on P.E.I. is owned by the Crown, and the balance is owned by some 15,000 woodlot owners, there would appear to be a need to establish an accurate figure with regards to the availability of the wood resource on a continuing basis.

This matter is currently under active discussion between the Energy Corporation and the Department of Energy and Forestry. A private woodlot owners survey has recently been completed by the Province of New Brunswick, and this survey is being studied to determine the best course of action for this Province to take in order to refine our knowledge of the quantity of biomass available for fuel purposes.

6.5 Heating System for Sleepy Hollow Correctional Centre

At the request of the Wood Energy Committee, the Energy Corporation retained a Consultant to carry out a review of a wood-fired heating system for the Sleepy Hollow Correctional Centre. Sleepy Hollow Correctional Centre has an existing wood-fired system, however, its operation since installation has not been considered satisfactory. The gasifier unit installed is the smallest size manufactured, and with the energy conservation measures incorporated in the building during construction the unit is over-sized for the heating load and will not modulate at low load without supervision. Under consideration is the relocation of components of the system, such as the boiler, to a new provincial facility; and replacing the complete system including the storage bin with a more reliable system requiring minimum supervision. A whole tree chip burning unit, similar to the Kings County Memorial Hospital's unit is being recommended. Sources of funding to implement the project are currently being investigated.

7. FINANCIAL STATEMENT

The financial statement prepared by our duly appointed Auditors follows:

June 14, 1983

AUDITORS' REPORT TO THE DIRECTORS

We have examined the balance sheet of Prince Edward Island Energy Corporation as at March 31, 1983 and the statements of revenues, expenditures and surplus — operating and capital for the year then ended. Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these financial statements present fairly the financial position of the company as at March 31, 1983 and the results of its operations for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

COOPERS & LYBRAND
CHARTERED ACCOUNTANTS

PRINCE EDWARD ISLAND ENERGY CORPORATION
BALANCE SHEET AS AT MARCH 31, 1983

ASSETS

	1983 $	1982 $
CURRENT ASSETS		
Cash	44,075	90,812
Term deposits	30,000	—
Accounts receivable	1,149,201	560,681
Accrued interest receivable	2,602	—
Projects under development (note 2)	—	2,454,518
	1,225,878	3,106,011
FIXED ASSETS — at cost (note 1)	10,215,225	—
	11,441,103	3,106,011

LIABILITIES

CURRENT LIABILITIES		
Accounts payable and accrued liabilities	153,594	38,351
Holdbacks payable	882,560	—
Bank loan (note 3)	3,911,155	1,520,000
Province of Prince Edward Island loan	1,500,000	—
	6,447,309	1,558,351

SURPLUS

OPERATING	266,446	205,272
CAPITAL (note 4)	4,727,348	1,342,388
	4,993,794	1,547,660
	11,441,103	3,106,011

SIGNED ON BEHALF OF THE BOARD

J. T. Driscoll
Director

Director

PRINCE EDWARD ISLAND ENERGY CORPORATION
STATEMENT OF REVENUES AND EXPENDITURES
— OPERATING AND SURPLUS
FOR THE YEAR ENDED MARCH 31, 1983

	1983 $	1982 $
REVENUES		
Grants		
Province of Prince Edward Island	532,575	679,706
Fisheries and Environment Canada	—	100,000
Federal Department of Energy, Mines and Resources	32,618	—
Tender deposits	—	200
Sale of steam - Kings County Memorial Hospital	80,454	—
Sale of Equipment	5,342	—
	650,989	779,906
EXPENDITURES		
Projects - (Schedule)	320,839	618,025
Administration		
Consulting	123,388	51,895
Office furniture	1,177	192
Directors' honorarium	8,214	8,542
Travel	13,364	16,162
Office supplies	923	457
Miscellaneous	630	1,823
Telephone	4,061	4,331
Wages and wage levies	108,504	96,646
Audit	3,700	4,100
Materials and supplies	5,015	3,913
	268,976	188,061
TOTAL EXPENDITURES	589,815	806,086
EXCESS REVENUES (EXPENDITURES) FOR THE YEAR	61,174	(26,180)
SURPLUS - BEGINNING OF YEAR	205,272	231,452
SURPLUS - END OF YEAR	266,446	205,272

PRINCE EDWARD ISLAND ENERGY CORPORATION
STATEMENT OF REVENUES AND EXPENDITURES
— CAPITAL AND SURPLUS
FOR THE YEAR ENDED MARCH 31, 1983

	1983 $	1982 $
REVENUES		
— Province of Prince Edward Island	70,495	500,000
— Federal Department of Energy, Mines and Resources	3,269,500	474,489
— Sale of steam	111,473	—
— Interest	3,987	11,912
	3,455,455	986,401
EXPENDITURES		
— Energy from waste plant operations	70,495	—
NET REVENUES FOR THE YEAR	3,384,960	986,401
SURPLUS - BEGINNING OF YEAR	1,342,388	355,987
SURPLUS - END OF YEAR	4,727,348	1,342,388

PRINCE EDWARD ISLAND ENERGY CORPORATION
NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED MARCH 31, 1983

1. ACCOUNTING POLICY

Fixed Assets

Minor fixed assets are recorded as a cumulative figure which is retired out of grants and revenues and expensed in the statement of revenues and expenditures during the period in which the transaction occurs.

Major fixed assets remaining the property of the Prince Edward Island Energy Corporation are transferred to the fixed asset account from projects under development when such projects are complete and all funds have been received. The energy from waste plant will be depreciated beginning in 1984.

	Cost
	$
Energy from waste plant	10,215,225
Furniture and fixtures	1,177
	10,216,402
Less: Retirements out of grants ...	1,177
	10,215,225

2. PROJECTS UNDER DEVELOPMENT

The company follows the policy of capitalizing those projects which are incomplete at year end. When such projects are completed and all funds have been received, they will be removed from the balance sheet.

	1983	1982
	$	$
Energy from waste ..	—	2,454,518
	—	2,454,518

3. SECURITY FOR BANK LOAN

The bank loan is secured by a letter of guarantee from the Province of Prince Edward Island.

4. CAPITAL SURPLUS

The corporation has adopted the policy of capitalizing those funds received in financial support of the Waste Burning Plant. The surplus will be amortized to income over the useful life of the plant beginning in 1984.

PRINCE EDWARD ISLAND ENERGY CORPORATION
SCHEDULE OF PROJECT COSTS
FOR THE YEAR ENDED MARCH 31, 1983

	1983 $	1982 $
Montague hospital wood chip burning unit		
— capital	61,390	327,369
— operations	70,253	35,623
— monitoring and evaluation	40,773	—
Electric supply demand study	7,683	50,060
Wood blocking and splitting program	4,027	21,292
Ethanol plant	766	183,681
Agricultural energy conservation	31,977	—
Renewable energy initiatives	95,472	—
Montague Junior High School		
— wood chip burning unit	5,040	—
Sale of equipment	3,458	—
	320,839	618,025

8. ACKNOWLEDGEMENT

The Corporation acknowledges with thanks the contributions made by a number of individuals and organizations within the federal and provincial governments and the private sector which have contributed substantially to activities of the Corporation. Without these donated contributions of expertise, criticism and advice the Corporation's activities would be seriously impaired.

POOR

QUALITY

ORIGINAL